

FUNDAMENTALS OF CENTRAL OFFICE
MAINTENANCE ADMINISTRATION
SAMPLING INSPECTION PLAN

1. GENERAL

1.01 This practice provides information to supplement the sampling inspection plans provided in Part 13 of the Controlled Maintenance (CM) Plan in effect for each type of central office switching equipment, except electronic switching systems (ESS).

1.02 This section is reissued to agree with the various CM Plans. The methods and procedures apply to all types of central offices, except ESS.

2. SAMPLING

2.01 Refer to Part 13 of the CM Plan in effect for the type of equipment in your central office for general information on sampling, definition of terms used, the reasons for use of sampling, and instructions on the application of sampling to central office equipment.

2.02 The forms needed and their use are described in the applicable CM Plans.

2.03 For the purpose of this practice, the following additional definitions are provided.

Inspection Item - A characteristic or a property selected for the purpose of inspection. The majority of these, selected as inspection items, are such as have requirements stated in Bell System Practices - Central Office Maintenance, Apparatus Requirements and Adjusting Procedures sections. In some cases these requirements may, however, be based on accepted standards of workmanship.

Defect - The failure of a single piece of

the apparatus to meet a requirement for an inspection item. For example, the failure of a single relay to meet the requirement for contact wear would constitute a defect.

% Defective Tolerance - The per cent defective with respect to a particular inspection item which should not be exceeded in an acceptable universe. The per cent defective tolerance for an inspection item should be established before starting the sample inspection. This per cent defective tolerance should be based on the probable effect on service that would result if this per cent of defects was allowed to exist in Plant for a short or long period of time.

Spottiness - That condition where the concentration of defects for any inspection item within a sub-universe is in excess of what might be expected due to variation of ages (vintage) on equipment which may exist within the central office.

Inspection Limit - The limit (expressed in per cent defects of the sample total) above which it is no longer economical to continue with the sample inspection. The inspection limit for an inspection item should be established before starting the sample inspection. For example, assume an inspection limit of 25%; when the number of defects found during the sample inspection reaches 25% the sample inspection activity stops and the total item universe is scheduled for test and inspection with correction of all detected failure items.

% of Defects Found. When the sampling inspection has been completed, the percentage of defects for each inspection item, and the percentage of the units in

the sample upon which defects were found, should be computed as follows:

$$\frac{\text{Number of Defects Found on a Given Inspection Item}}{\text{Number of Units (pieces) of apparatus in the sample}} \times 100 = \text{\% of defects for a given inspection item}$$

$$\frac{\text{Number of units (pieces) of apparatus in sample upon which defects were found}}{\text{Number of units (pieces) of apparatus in the sample}} \times 100 = \text{\% of the units in the sample upon which defects were found}$$

3. PROCEDURES

The following procedures are to be applied, in addition to those specified in the applicable CM PLAN.

3.01 The Central Office Supervisor should establish the % Defective Tolerance for the sample inspection item before the sampling inspection begins.

3.02 The Central Office Supervisor should establish the Inspection Limit for the sample inspection item before the sampling inspection begins.

3.03 When the sampling inspection is complete and the % Defects Found is less than the % Defective Tolerance, the defects found shall be corrected with no other action required.

3.04 When the sampling inspection is complete and the % Defects Found is equal to or greater than the % Defective Tolerance, the defects found shall be corrected and consideration should be given to establishing a procedure of effectively detecting and correcting probable defects in the non-sampled portions of the item universe.

3.05 During the progress of the sampling inspection, if the % Defects Found is equal to the Inspection Limit, the sampling inspection shall be stopped, defects corrected, and a more efficient means utilized for testing and correction of the probable volume of defects in the entire universe. Consider application of Selective Maintenance Improvement Program per 201-101-901SW.